

**In the Claims**

The claims are amended as follows:

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1 1. (Previously amended) A brake controller system comprising:

dl 2 brakes located on a towed vehicle;

3 a brake activator for applying force to said brakes;

4 a brake control unit in communication with said brake activator, said brake  
5 control unit having a CPU, said brake control unit adapted to receive electrical energy from a  
6 battery;

7 said CPU in electrical communication with a bus that is in communication with at  
8 least said brake activator such that said CPU provides a variable brake activation signal to said  
9 brake activator;

10 a pressure sensor for providing pressure information to said CPU, said pressure  
11 sensor measuring a pressure within a master brake cylinder of a towing vehicle; and

12 a voltage booster adapted to receive electrical energy from said battery and  
13 provide boosted voltage to said brake activator.

1 2. (Original) The brake controller system according to claim 1 wherein said brakes are  
2 electric brakes.

1 3. (Canceled)

1 4. (Original) The brake controller system according to claim 1 wherein:

2 said brake activator is comprised of magnets; and

3 a current sensor for maintaining constant amperage to the towed vehicle brakes.

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1 5. (Original) The brake controller system according to claim 4 wherein:

2 said CPU adjusts a signal for brake activation, based at least partially on data

3 from said current sensor.

1 6. (Canceled)

1 7. (Previously amended) The brake controller system according to claim 1 wherein:

2 said brake control unit is located within the towing vehicle.

1 8. (Original) The brake controller system according to claim 1 wherein:

2 said bus communicates said CPU with brake lights on said towing vehicle.

1 9. (Canceled)

1 10. (Original) The brake controller system according to claim 1 wherein:

2 said bus is a brake wire that receives multiplexed signals.

1 11. (Previously amended) The brake controller system according to claim 1 further  
2 comprising:

3 an alpha numeric display on a front face of said brake controller unit and in  
4 communication with said CPU for use as a visual indicator to an operator.

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*con*  
1 12. (Original) The brake controller system according to claim 1 further comprising:

2 a control panel on said brake controller unit comprising an adjust selection display  
3 down button, and adjust selection display up button, an enter selection displayed button and a  
4 scroll menu button.

1 13. (Previously amended) The brake controller system according to claim 1 further  
2 comprising:

3 a sliding brake switch on brake controller unit for manually and variably  
4 operating said brakes.

1 14. (Previously amended) A method for operating a brake controller system comprising:  
2 receiving, by a CPU, a pressure signal indicating an amount of pressure in a  
3 master brake cylinder of a towing vehicle;

4 signaling a voltage booster, by said CPU, to supply additional voltage above a  
5 towing vehicle standard voltage; and

6 actuating the towed vehicle brakes.

1 15. (Previously amended) A method for operating a brake controller system for a towed  
2 vehicle comprising:

3 sensing brake fluid pressure within a towing vehicle's master brake cylinder;

4 sensing current in an electric brake system on said towed vehicle;

5 calculating with a brake controller unit the appropriate amount of brake force to  
6 be applied by a brake activator;

7 determining, by said CPU, whether a voltage booster is required to supply  
8 additional voltage to said towed vehicle's electric brake system;

9 actuating said towed vehicle's electric brakes without actuating said towing  
10 vehicle brakes by use of a manual thumb brake switch;

11 generating a signal from said brake controller unit that is based upon and

12 directly proportional to a linear position of the manual thumb brake switch; and

13 activating said brake activator with said signal; and

14 applying an appropriate amount of brake force with an appropriate amount of  
15 voltage as directed by said brake controller unit.

1 16. (Previously amended) The method for operating a brake controller system according  
2 to claim 15 further comprising:

3 signaling brake lights and a brake activator with said brake controller unit over a  
4 brake line by multiplexing signals over said brake line.

1 17. (Canceled)

1 18. (Original) The method for operating a brake controller system according to claim 15  
2 further comprising the steps of:

3 storing data within a CPU of said brake controller system;

4 displaying at least a portion of said data with an alphanumeric display as a visual  
5 indicator to the vehicle operator during operation of the brake controller;

6 wherein said data is selected from a group comprising: Brake Gain; Time; Date;  
7 Last Maximum Brake; Last Maximum Stroke; Last Test: Maximum Brake; Last Test: Maximum  
8 Stroke; Truck Control: Serial Number; Truck Control: Date Manufactured; Truck Control: Born  
9 on Date; Trailer Control: Serial Number; Trailer Control: Date Manufactured; Trailer Control:  
10 Born on Date; Run Diagnostic: Test Brakes.

1 19. (Previously amended) A trailer brake system comprising:

2 a master brake fluid pressure sensor for measuring a brake fluid pressure of a  
3 brake system in a towing vehicle and for providing a brake fluid pressure signal;

4 a brake controller for controlling a brake activator, said brake activator being for  
5 activating a trailer brake, said brake controller comprising a CPU for receiving said brake fluid  
6 pressure signal and for generating a signal for said brake activator so that said trailer brake is  
7 activated with a force related to said brake fluid pressure signal.

1           20. (Previously added) The trailer brake system of claim 19, further comprising:

2                   a finger control for actuating said trailer brake system without actuating said  
3 brake system of said towing vehicle, said finger control being electrically connected to said CPU,  
4 said finger control generating a braking signal based on a movement or position of said finger  
5 control.

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1           21. (Previously amended) The brake controller system of claim 19, further comprising:

2                   an alpha numeric display connected to said CPU for displaying trailer brake  
3 related information to user during operation of said trailer brake system, said trailer brake related  
4 information being at least one of Brake Gain; Time; Date; Last Maximum Brake; Last  
5 Maximum Stroke; Last Test: Maximum Brake; Last Test: Maximum Stroke; Truck Control:  
6 Serial Number; Truck Control: Date Manufactured; Truck Control: Born on Date; Trailer  
7 Control: Serial Number; Trailer Control: Date Manufactured; Trailer Control: Born on Date; and  
8 Run Diagnostic: Test Brakes.

1           22. (Previously added) A trailer brake system comprising:

2                   a master brake fluid pressure sensor for measuring a brake fluid pressure of a  
3 brake system in a towing vehicle and for providing a brake fluid pressure signal;

4                   a brake controller for controlling a brake activator, said brake activator being for  
5 activating a trailer brake, said brake controller comprising a logic unit for receiving said brake  
6 fluid pressure signal and for generating a signal for said brake activator so that said trailer brake  
7 is activated with a force related to said brake fluid pressure signal; and

- 8 a voltage booster capable of receiving a signal from said logic unit and supplying
- 9 an additional voltage above a towing vehicle standard voltage to said brake actuator.

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